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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/996,516	11/29/2001	Walter B. Hill JR.	3597-127	3529

33432 7590 10/11/2005
KILYK & BOWERSOX, P.L.L.C.
400 HOLIDAY COURT
SUITE 102
WARRENTON, VA 20186

EXAMINER

HUG, ERIC J

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,516

Applicant(s)

HILL ET AL.

Examiner

Eric Hug

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 1-13, 15, 17, 28 and 29 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 16 and 18-27 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 8, 2005 has been entered.

Allowable Subject Matter

Claims 14; 18, 16, and 19-27 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 14 is allowed, because the prior art does not disclose or suggest a method of improving sizing in a paper or paperboard product including the steps of combining a papermaking sludge with an enzyme composition; combining the enzyme-treated sludge with a papermaking pulp, and then forming a product identical to one made with untreated sludge such that the product made with the enzyme-treated sludge has comparatively improved sizing, wherein the enzyme composition comprises at least one polyamide oligomer and at least one cellulytic enzyme.

Claims 18, 16, and 19-27 are allowed, because the prior art does not disclose or suggest a method of improving sizing in a paper or paperboard product including the steps of combining a papermaking sludge with an enzyme composition, combining the enzyme-treated sludge with a papermaking pulp, and then forming a product identical to one made with untreated sludge such

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that the product made with the enzyme-treated sludge has comparatively improved sizing, wherein the enzyme composition comprises at least one of a protease, an esterase, or a lipase.

Response to Arguments

Applicant's arguments filed May 9, 2005 and August 24, 2004 have been fully considered. It is recognized that the prior art of record does not teach addition of the claimed enzyme compositions to a papermaking sludge and then using the treated sludge to improve sizing in a paper product.

Election/Restrictions

This application is in condition for allowance except for the presence of claims 1-13, 15, 17, 28, and 29 to inventions non-elected with traverse in the reply filed on December 19, 2003. Applicant is requested to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

De Vos (US 3,047,452) repulps coated paper broke with enzyme treatment.

Fuentes (US 4,923,565) increases the freeness of paper pulp with an enzyme solution.

Wiatr (US 4,936,994) teaches enzyme treatment of papermachine waste water for slime removal.

Irie et al (US 5,176,796) adds lipase to pulp for pitch treatment.

Johnson (US 5,330,619) uses enzymes in the repulping of wet strength containing papers.

Olsen et al (US 6,066,233) discloses enhancing the freeness of pulp with an enzyme mixture.

von der Osten et al (US 6,017,751) desizes cellulose textile fibers with a lipase.

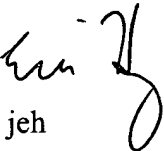
Franks (US 6,241,849) uses enzymes for deinking and decoloring recycled printing paper.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


jeh